

NAUSHONIA PANAMENSIS, NEW SPECIES (DECAPODA:
THALASSINIDEA: LAOMEDIIDAE) FROM THE
PACIFIC COAST OF PANAMA, WITH
NOTES ON THE GENUS

Joel W. Martin and Lawrence G. Abele

Abstract.—*Naushonia panamensis* is described from a Pacific Panamanian mud flat. It is the fifth described species of the genus and the first recorded from the tropical eastern Pacific. A revised key to the genus is presented.

The genus *Naushonia* Kingsley, 1897, was reviewed recently by Goy and Provenzano (1979). At that time four species were known: *N. crangonoides* Kingsley, 1897, ranging from Woods Hole, Massachusetts, to Bogue Sound, North Carolina; *N. portoricensis* (Rathbun, 1901) collected at Puerto Rico, Cuba, Bermuda, and Quintana Roo, Mexico; *N. perrieri* (Nobili, 1904) known from French Somaliland, Red Sea; and *N. macginitiei* (Glassell, 1938) known from La Jolla, California, and Sonora, Mexico. Goy and Provenzano (1979) were able to examine at least three specimens of each species except *N. perrieri*, which was unavailable. Apparently species in this genus are either rare or difficult to collect. The species are known from only a few specimens each and there are probably two or three additional species known from larvae only (see review by Goy and Provenzano 1979).

While at the Smithsonian Tropical Research Institute Marine Laboratory in Panama in 1972, one of us (LGA) collected a single male specimen of an apparently undescribed species of *Naushonia*, which we describe here. Description of this species extends the known range of the genus into the tropical eastern Pacific.

Drawings were made with the aid of a Wild M-5 stereoscope and a Wild M-11 compound stereoscope, with camera lucida. Because only a single specimen was collected, the mouthparts are left intact. Carapace length (including rostrum), carapace width, and total length are abbreviated CL, CW, and TL respectively.

Naushonia panamensis, new species
Figs. 1-3

Material.—Panama: Eastern Pacific, west bank of Panama Canal; in mud flat off mangroves, about 200 m north of Interamerican Bridge of Panamanian Highway; 4 November 1972; coll. L. G. Abele, J. B. Graham; 1 male, CL 6.2 mm, CW 3.7 mm, TL 14.7 mm (Holotype, USNM 190735).

Description.—Carapace (Figs. 1, 2A, 2D) cylindrical with linea thalassinica pronounced; anterior and posterior median dorsal carinae, separated by deep, distinct cervical groove. Anterior dorsal carina weak. Postorbital tooth strong, smooth, and simple. Anterolateral tooth strong and acute with small posterior spine. Margins of carapace lightly setose. Anterior part of carapace with paired rows of small spines roughly circumscribing gastric region and converging ante-

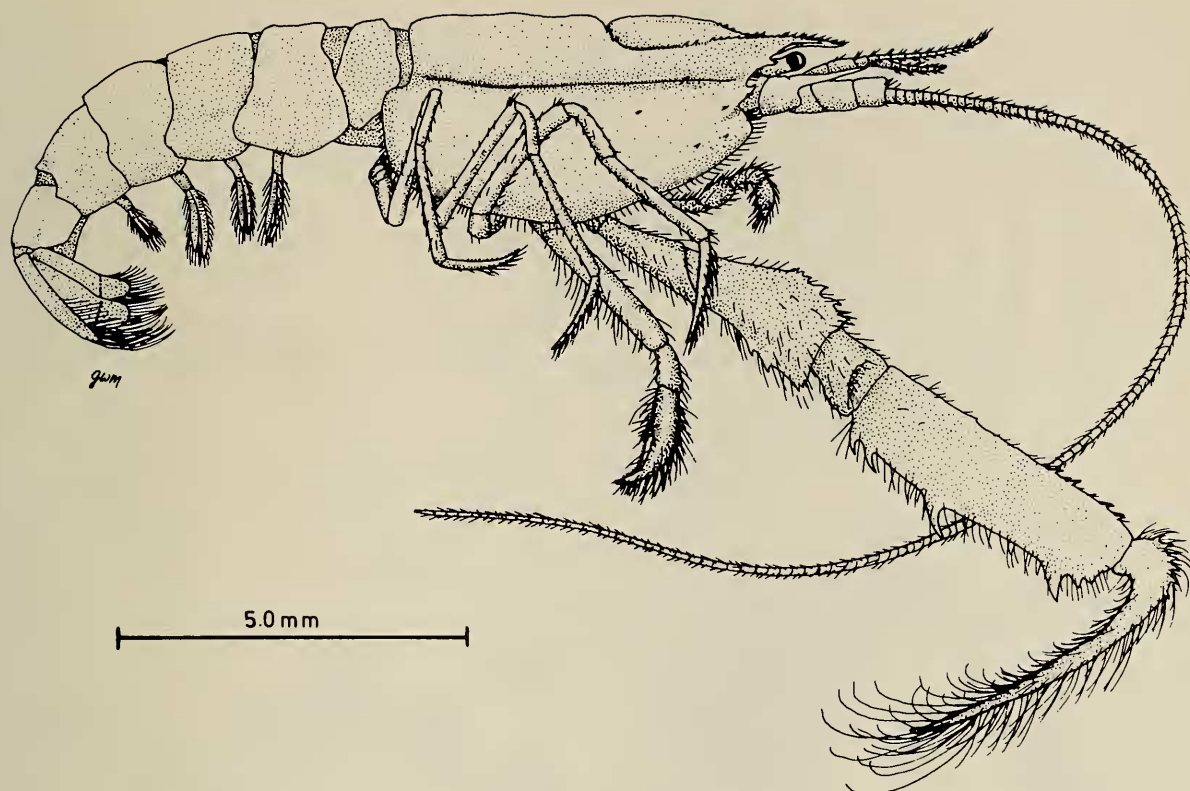


Fig. 1. *Naushonia panamensis*, male holotype, lateral view.

riorly onto base of rostrum. Rostrum triangular, slightly down-curved and medially depressed, tipped with sparse setae and several small spines.

Eyes well developed, clearly visible from above.

Abdomen slightly longer than carapace. Pleura of segments 1–3 broadly rounded ventrally; pleura of segments 5 and 6 nearly straight ventrally. Pleopods absent on first abdominal segment; other pleopods biramous, lanceolate, and with plumose setae.

Telson (Fig. 2B) broadly rounded, margin with single lateral spine at about midlength and many plumose setae. Uropods (Fig. 2B) with complete transverse sutures, most obvious on medial branch. Lateral branch with 3–4 lateral spinules proximal to lateral end of transverse suture; medial branch with single lateral spine at end of suture. Both branches with many plumose marginal setae.

Antennae almost as long as body (14.0 mm), multiarticulate, lightly setose.

Antennal scale (Fig. 2C) ovate with 4 lateral and 2 terminal teeth, several lightly plumose lateral setae and about 20 medial, long, plumose setae.

First pereopods (Figs. 1, 3E) large, slender, subchelate, and subequal. Merus with 5 ventral and 6 dorsal teeth; carpus without teeth and with shallow distal groove; propodus with 2 strong proximal ventral teeth, 1 midventral tooth, 1 large and 2–3 small distal ventral teeth, and 5 small teeth located along distal $\frac{1}{2}$ of dorsal margin. Dactylus long, slender, heavily setose, with 6 small dorsal proximal teeth.

All pereopods (Fig. 3) with many simple setae. Second pereopod shorter and more robust than third to fifth, its dactylus thicker and more setose than those of remaining posterior pereopods and bearing about 35 movable ventral spines. Dactyli of pereopods 3–5 with ventral row of about 50–70 movable spines.

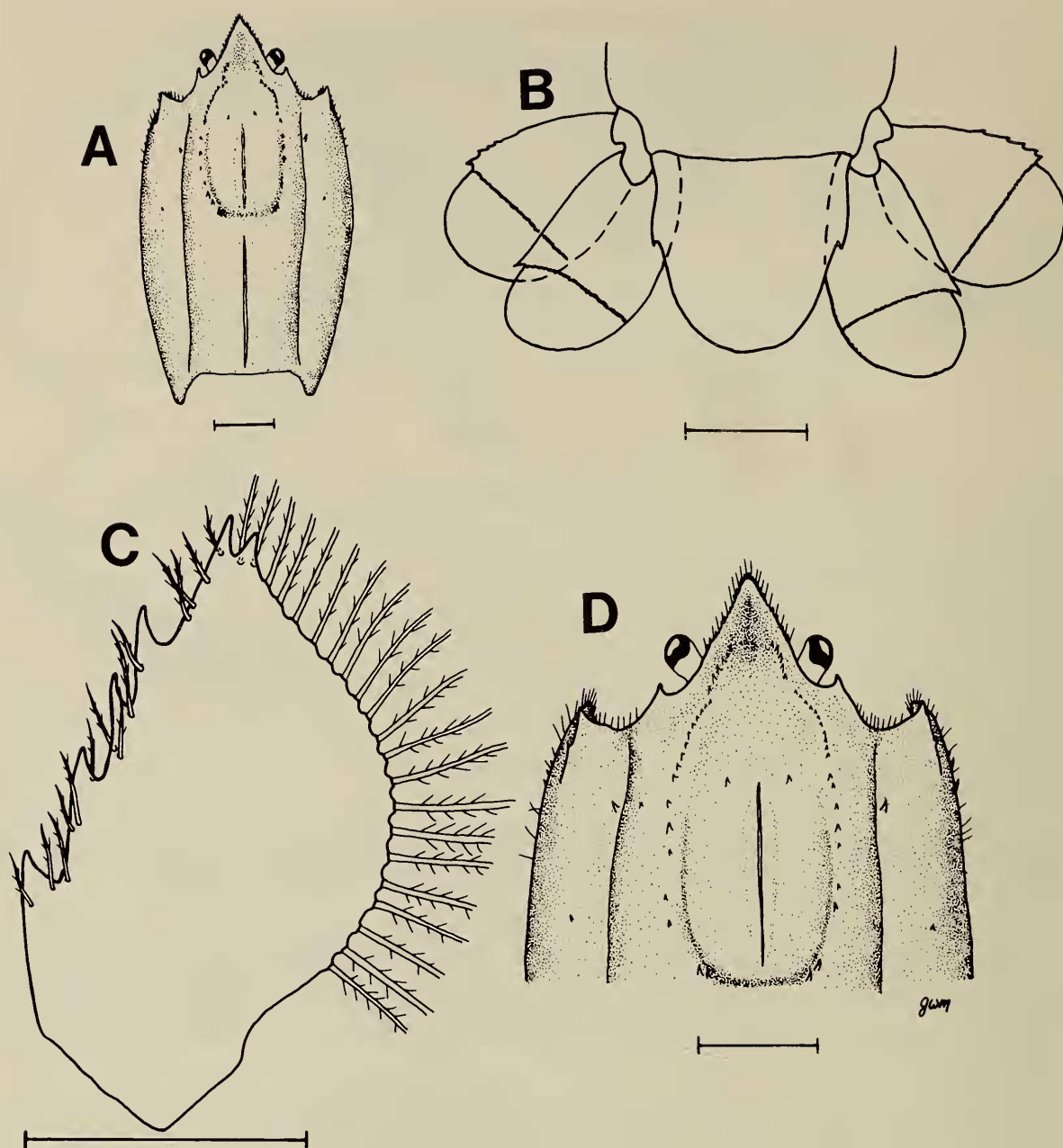


Fig. 2. *Naushonia panamensis*, male holotype: A, Dorsal view of carapace; B, Telson and uropods, setae not illustrated; C, Antennal scale; D, Anterior of carapace, dorsal view. Scale bar = 1.0 mm for A, B, and D; bar = 0.5 mm for C.

Habitat.—The single male specimen was collected from a small puddle (approximately $10 \times 20 \times 3$ cm) on a large exposed mud flat about 50 meters seaward of a red mangrove swamp. The salinity was 24‰, temperature 28°C, although the salinity in this area can vary substantially (Glynn 1972).

Remarks.—*Naushonia panamensis* is the fifth described species of the genus and extends the known range of the genus to the tropical eastern Pacific; the other Pacific *Naushonia* is *N. macginitiei*, known from southern California (Glasell 1938) and Sonora, Mexico (Goy and Provenzano 1979).

The following combination of characters will distinguish *N. panamensis* from other species in the genus: rostrum triangular, armed with small lateral spines; postorbital tooth simple; telson with 1 lateral spine at about midlength; antennal

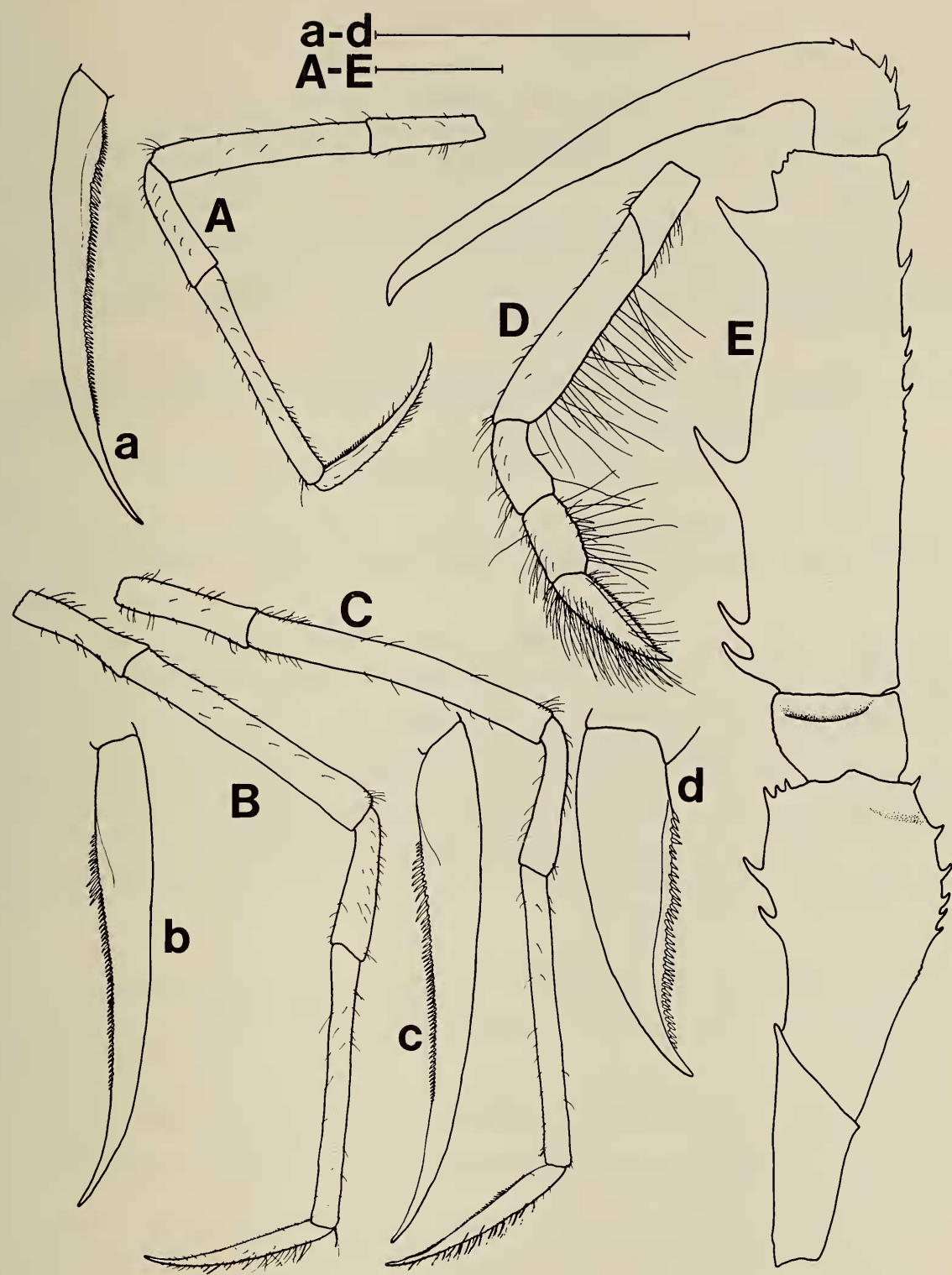


Fig. 3. *Naushonia panamensis*, male holotype, pereopods: A-a, Fifth pereopod and dactylus; B-b, Fourth pereopod and dactylus; C-c, Third pereopod and dactylus; D-d, Second pereopod and dactylus; E, First pereopod, setae not illustrated. Scale bar = 1.0 mm.

scale with 4 marginal and 2 terminal teeth; propodus of first pereopod long and slender with length more than three times width; dactylus of first pereopod armed with 6 teeth on proximal, superior margin; dactyli of pereopods 2–5 armed with numerous (35–70) movable spines.

The key presented by Goy and Provenzano (1979) can be modified to include *Naushonia panamensis* as follows:

1. Uropods with complete transverse sutures.
 - A. Linea thalassinica pronounced, carinae of the carapace weak.
 - a. Telson without lateral spine; antennal scale with 10 or more marginal teeth *N. crangonoides*
 - b. Telson with lateral spine; antennal scale with less than 10 (holotype with 6) marginal teeth *N. panamensis*
 - B. Linea thalassinica not pronounced, carinae of carapace well developed.
 - a. Telson with lateral spine; antennal scale with 6 marginal teeth, distal tooth largest and recurved inward; lateral movable spines on dactylus of fourth pereopod only *N. portoricensis*
 - b. Lateral movable spines present on dactyli of all 3 posterior pereopods *N. perrieri*
2. Uropods with incomplete transverse sutures; uropodal exopodites with 2 lateral spines, margin ending with 2 small spines and stout movable spine *N. macginitiei*

Although we have not examined the specimens seen by Goy and Provenzano, completeness of the suture of the uropods seems a variable taxonomic character; although this suture is complete in *N. panamensis*, it is weak and indistinct toward the medial margin (as in the illustration of *N. portoricensis* by Goy and Provenzano), especially on the lateral branch. Also, relative development of the linea thalassinica is not clear to us from the illustrations of Goy and Provenzano (1979:354). Perhaps a simpler key, based on the illustrations of Goy and Provenzano and those of Glassell (1938) and Chace (1939), and incorporating our single specimen of *N. panamensis*, is:

1. Rostrum acute to broadly rounded.
 - A. Propodus of first pereopod with 2 strong proximal ventral teeth; dactylus of first pereopod with proximal superior teeth; postorbital spine simple *N. panamensis*
 - B. Propodus of first pereopod without 2 strong proximal ventral teeth, with either no teeth below midventral tooth or a row of small spines; dactylus of first pereopod without superior proximal teeth; postorbital spine bifid or trifold.
 - a. Antennal scale with 10 or more marginal teeth; uropodal lateral branch with 5 outer spines *N. crangonoides*
 - b. Antennal scale with fewer than 10 marginal teeth; uropodal lateral branch with 2 outer spines.
 1. Terminal teeth of antennal scale strongly curved medially
..... *N. portoricensis*
 2. Terminal teeth of antennal scale straight, not strongly curved medially *N. macginitiei*
2. Rostrum truncate, with serrate anterior margin *N. perrieri*

Etymology.—After the type-locality.

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Department of Biological Science, Florida State University, Tallahassee, Florida 32306.